

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions and listings of claims in the application.

**COMPLETE LISTING OF THE CLAIMS:**

Claims 1-3 : (Canceled)

Claim 4 : (New) A receiver for receiving two orthogonally polarized received signals having phases and a same carrier frequency, comprising: receiving branches for the received signals; demodulators for demodulating the received signals; means for synchronizing the phases of the received signals to a phase of a transmitted signal; and polarization decouplers for both receiving branches for compensating for cross-polar crosstalk between the received signals, and for polarization decoupling the received signals after their demodulation by the demodulators and before their phase synchronization by the synchronizing means.

Claim 5 : (New) The receiver according to claim 4, wherein the demodulators in both receiving branches are driven with the same reference frequency delivered by a free-wheeling oscillator.

Claim 6 : (New) The receiver according to claim 4, wherein the demodulators in both receiving branches are driven with the same reference frequency delivered by an automatic frequency control of a controlled oscillator.